CALIFORNIA AREA TRIBAL ADVISORY COMMITTEE MEETING

June 9-10, 2015

Biggest California Issue

PPIC Statewide Survey

CONTACT
Linda Strean 415-291-4412
Serina Correa 415-291-4417

NEWS RELEASE

EMBARGOED: Do not publish or broadcast until 9:00 p.m. PDT on Wednesday, June 3, 2015.

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PPIC STATEWIDE SURVEY: CALIFORNIANS AND THEIR GOVERNMENT

For First Time, Water and Drought Seen as Biggest California Issue

MOST SUPPORT BROWN'S REVISED BUDGET, BACK PLAN FOR UC AND NEW TAX CREDIT

SAN FRANCISCO, June 3, 2015—Californians see water and drought as the most important issue facing the state, and most residents say people in their region are not doing enough to respond. These are among the key findings of a statewide survey released today by the Public Policy Institute of California (PPIC), with funding from The James Irvine Foundation.

For the first time in a PPIC survey, Californians are most likely to name water and drought (39%) as the most important state issue, followed by jobs and the economy (20%). Water and drought is the most frequently named issue in all regions, but Central Valley residents are the most likely to mention it (53%) (42% San Francisco Bay Area, 37% Orange/San Diego, 36% Inland Empire, 31% Los Angeles). In addition, 69 percent of Californians say the supply of water in their part of the state is a big problem—a record high since the survey began asking this question in 2009.

Just 28 percent of Californians say that people in their part of the state are doing the right amount to respond to the drought, while 60 percent say that their neighbors are not doing enough (7% too much).

The survey also asked about the governor's order to implement water restrictions in cities and towns to reduce water usage statewide by 25 percent. Nearly half of residents (46%) say the restrictions do the right amount to respond to the drought. About a third (36%) say the restrictions do not do enough, and 12 percent say they do too much.

"Public concern about the drought is at a record-high level today," said Mark Baldassare, PPIC president and CEO. "Most Californians are satisfied with the governor's actions, but a sizable number say the mandatory water reductions have not gone far enough."

When asked about Governor Brown's handling of the drought, 47 percent of Californians approve, 38 percent disapprove, and 15 percent don't know (likely voters: 44% approve, 47% disapprove, 10% don't know). Brown's overall job approval rating is slightly higher: 52 percent approve, 27 percent disapprove, 21 percent don't know (likely voters: 54% approve, 36% disapprove, 10% don't know). The legislature's job approval rating is 37 percent among adults and 30 percent among likely voters. Asked to rate national leaders, 58 percent of California adults and 49 percent of likely voters approve of the job President Obama is doing, while 27 percent of adults and 20 percent of likely voters approve of the U.S. Congress.

OVERALL MOOD

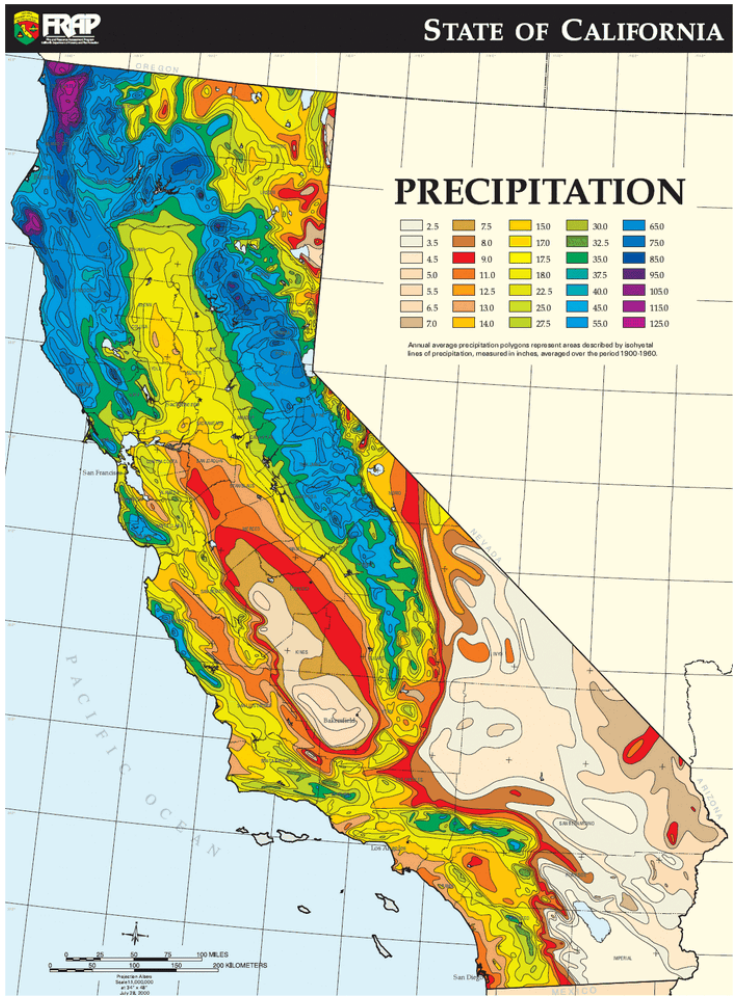
A plurality of Californians are now naming water and the drought (39%) as the most important issue facing people in California today, followed by jobs and the economy (20%). In May 2014, Californians were most likely to mention jobs and the economy (33%), followed by water and the drought (12%). Today, water and the drought are mentioned as the top issue more often in the Central Valley (53%) than in other regions. These findings do not vary much across income groups. Likely voters have views similar to those of all adults on the most important issues facing Californians.

"Thinking about the state as a whole, what do you think is the most important issue facing people in California today?"

Top five issues mentioned	All adults	Region					Likely voters
		Central Valley	San Francisco Bay Area	Los Angeles	Orange/ San Diego	Inland Empire	
Water, drought	39%	53%	42%	31%	37%	36%	38%
Jobs, economy	20	11	19	22	27	17	21
Crime, gangs, drugs	5	5	4	5	3	5	3
Environment, pollution, global warming	5	4	6	7	3	5	5
Immigration, illegal immigration	4	4	4	3	4	9	6

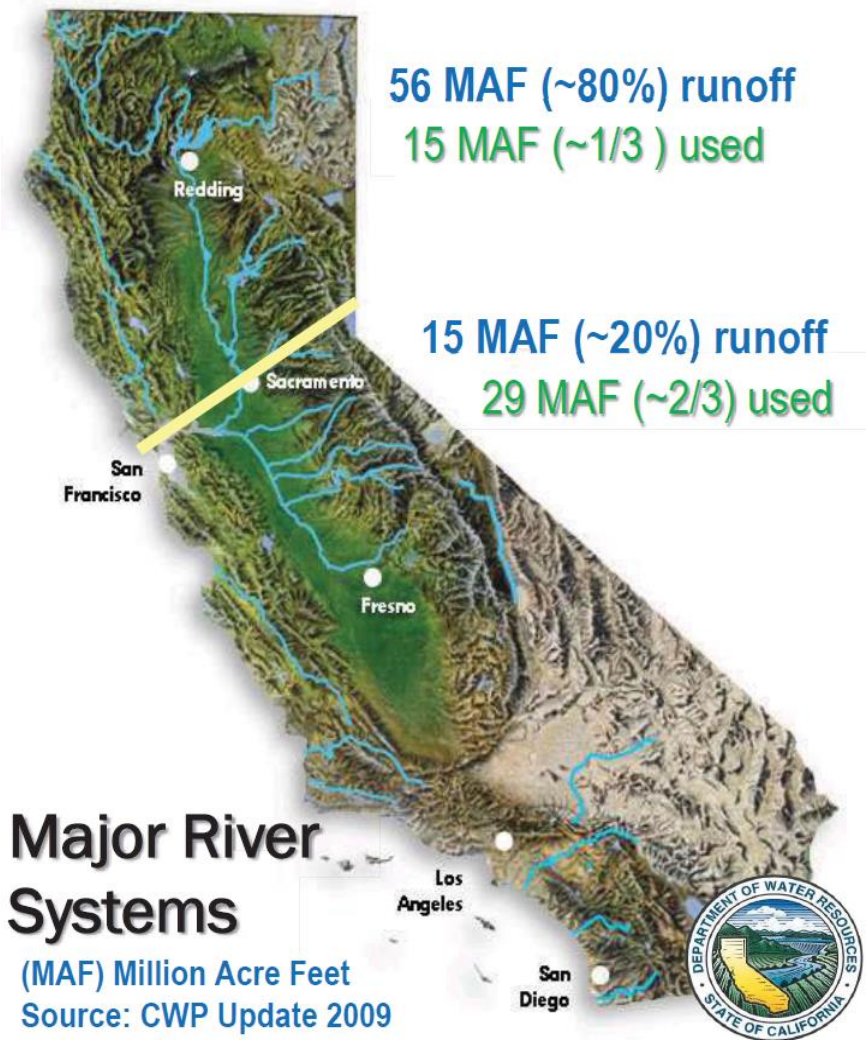
Forty-five percent of all adults and 40 percent of likely voters say that things in California are generally going in the right direction. The share holding this view was higher in March (50% adults, 49% likely voters) and similar in May 2014 (45% adults, 44% likely voters). Today, Democrats (57%) are much more likely than other registered voters to say that things are going in the right direction. San Francisco Bay Area residents (53%) are more likely than those in other regions to hold this view. The perception that things are generally going in the right direction declines as age increases (54% under age 35, 43% age 35 to 54, 40% age 55 and older).

What You Need To Know



- In average years, close to 200 million acre-feet (MAF) of water falls in the form of rain or snow in California.
- One acre-foot is about 326,000 gallons, or enough water to supply two typical families for a year
- California tribes need about 22,000 acre-foot of water per year (domestic needs)
- Most of the rain and snowfall occurs between October and April, while demand is highest during the hot and dry summer months.

Facts About California's Water System



- Over half of that water soaks into the ground, evaporates or is used by native vegetation. That leaves somewhere around 82 million acre-feet of usable surface water in average years. Of that water:
  - 48% goes to environmental uses such as in stream flows, wild and scenic river flows, required Delta outflow and managed wetlands.
  - 41% is used by agriculture
  - 9% is used by cities and industry.
- About 70% of California's available water occurs north of Sacramento, while about 75% of the demand occurs in the southern two-thirds of the state.

California Drought

- Water year 2014 ranked as the third driest on record in terms of statewide precipitation, with the three-year period of water years 2012-14 ranking as the driest consecutive three-year period on record in terms of statewide precipitation (**about – 190 MAF loss**) .

- 2015 is the driest winter in California's written record (5 percent). The lowest previous reading since 1950 was 25 percent of average (snow water content).

- The annual snowpack normally provides about a third of the water for California.

- Snowpack in the Cascade Range and Sierra Nevada contributes to the runoff in the state's largest rivers and to the groundwater basin recharge that support much of California's water needs.

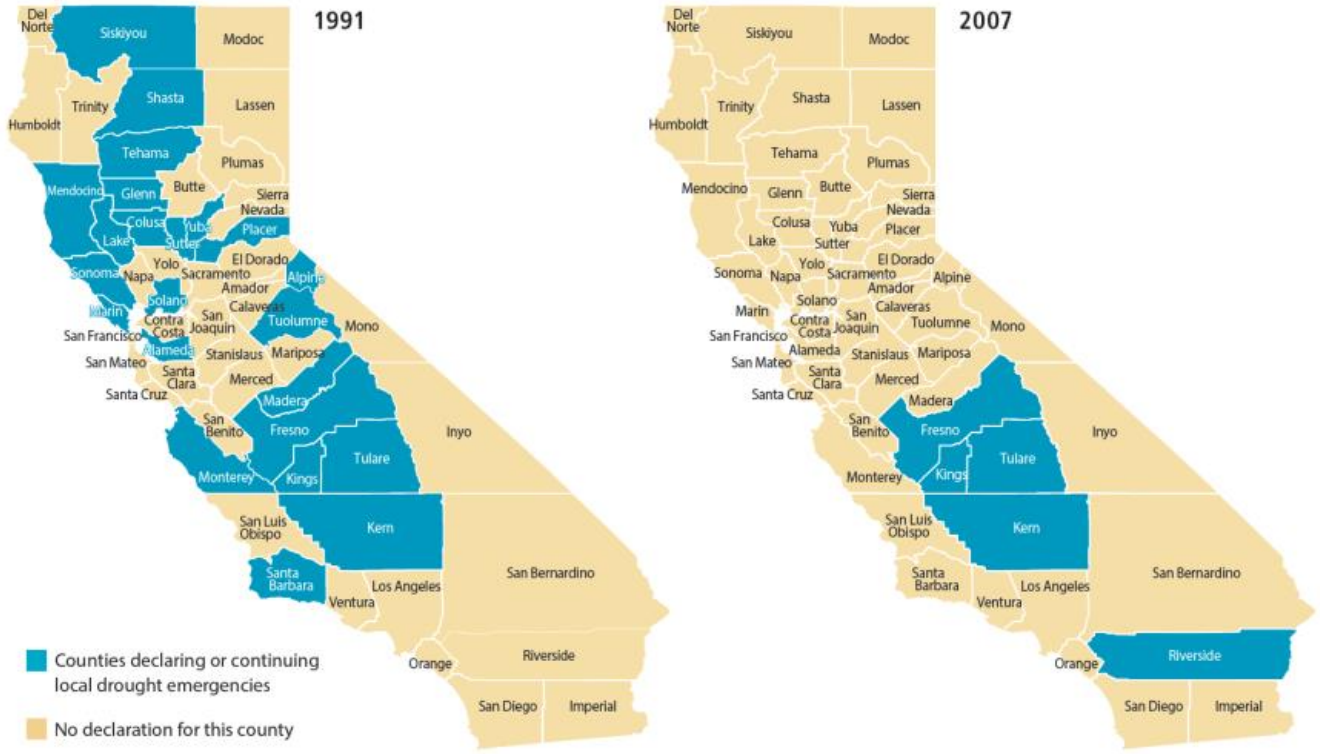
- **The State of California is restricting water use for the first time in history**

California Drought

- California's Mediterranean climate means that drought is not an unfamiliar sight in California:
- Since 1987, California has had 13 emergency proclamations (three statewide, two others included more than 19 counties) and three Executive Orders.
- 1977 was the driest statewide with just 21 percent of average rainfall, 47 of 58 counties declared local emergencies.

Drought Emergency Proclamations

Figure 1.2: Comparison of Counties with Emergency Proclamations



Data: California Office of Emergency Services

2015 Drought Emergency Proclamations

9 Tribes

- Cortina
- Hoopa
- Karuk
- Kashia
- Picayune
- Sherwood Valley
- Tule River
- Yocha Dehe
- Yurok

The Water Year

Agencies such as DWR or the U.S. Geological Survey (USGS) report hydrologic data on a water year basis. The water year extends from October 1 through September 30. Water year 2014, for example, spanned from October 1, 2013 through September 30, 2014. The (water year) 1987-92 drought corresponds to the calendar period of fall 1986 through summer 1992. Hydrologic data contained in this report are presented in terms of water years. Water project delivery data (e.g. SWP deliveries) are presented on a calendar year basis. Precipitation data are reported by the National Weather Service (NWS) based on an annual season of July 1 to June 30. When this report refers to annual precipitation amounts, the data are based on the NWS reporting season unless otherwise indicated.

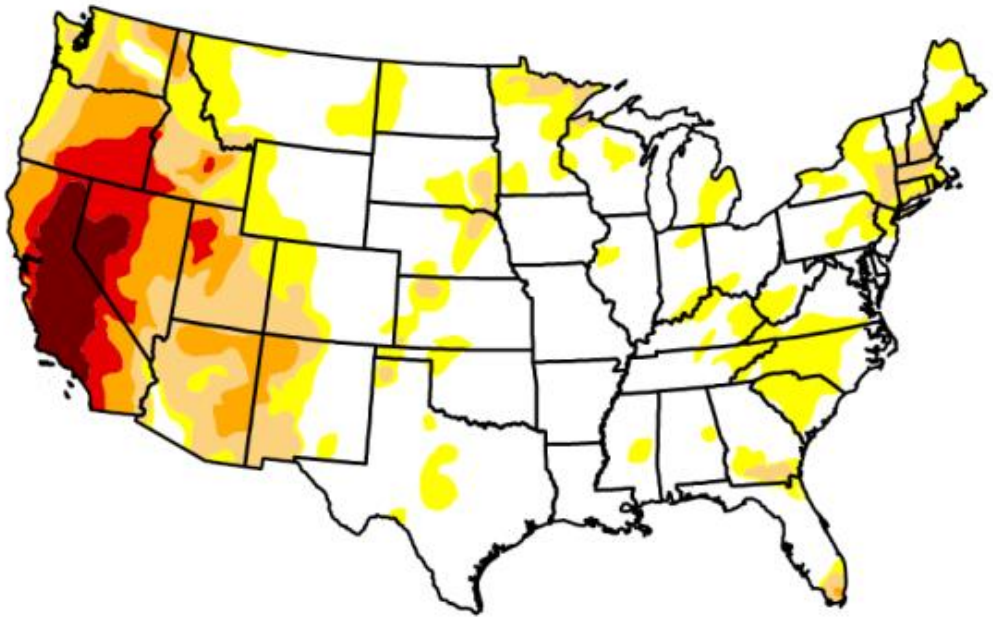
Drought History - CA

- Multi-Year Droughts of Large-Scale Extent Since 1900 (Based on statewide runoff)

Years	Years
1918-20	1976-77
1923-26	1987-92
1928-35	2001-02
1947-50	2007-09
1959-62	2012-15?

CA has been in a drought 36% years since 1918

U.S. Drought Monitor
CONUS



June 2, 2015
(Released Thursday, Jun. 4, 2015)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	56.75	43.25	24.57	14.19	7.09	3.13
Last Week *5/26/2015*	49.27	50.73	26.35	14.20	6.94	3.13
3 Months Ago *3/3/2015*	47.49	52.51	31.88	15.66	8.43	3.21
Start of Calendar Year *12/30/2014*	53.20	46.80	28.68	16.93	8.96	2.54
Start of Water Year *9/30/2014*	52.22	47.78	30.57	18.66	9.41	3.85
One Year Ago *6/3/2014*	52.14	47.86	37.32	27.28	13.24	3.02

Intensity:

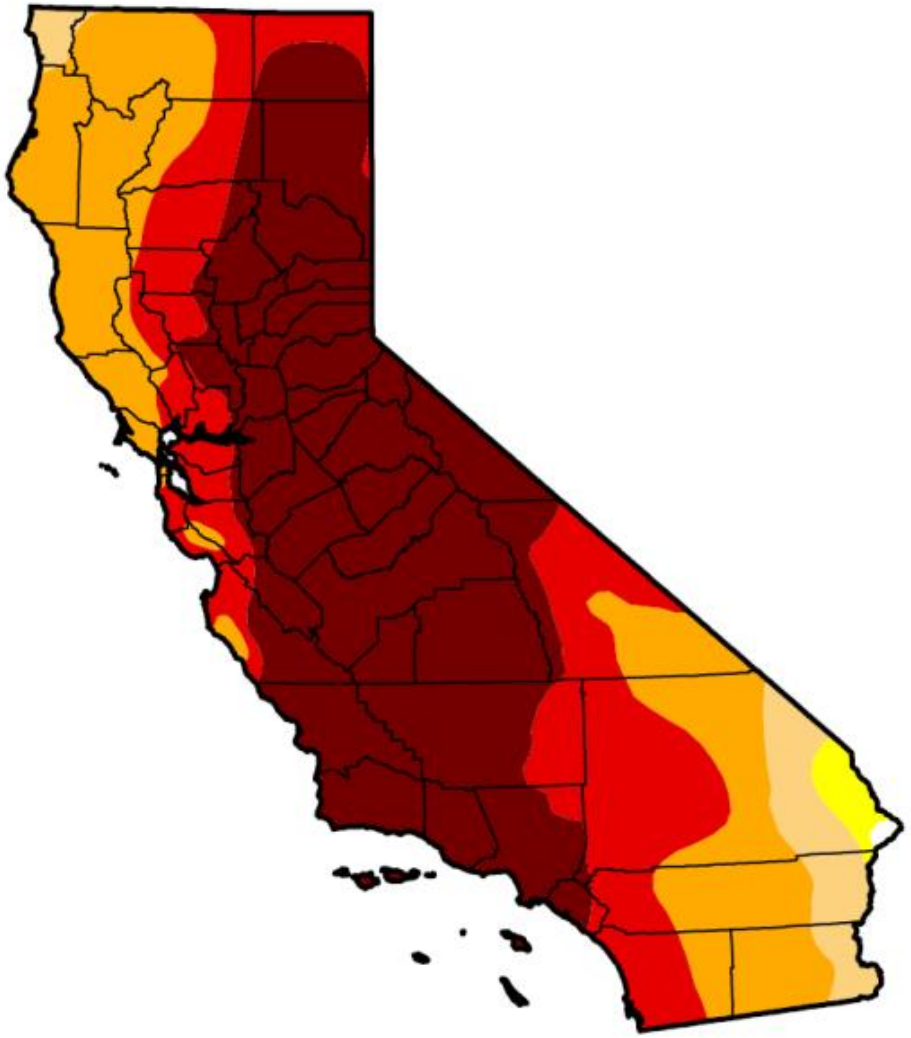
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author(s):
David Miskus
NOAA/NWS/NCEP/CPC

http://droughtmonitor.unl.edu/

U.S. Drought Monitor
California



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Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.14	99.86	98.71	93.91	69.61	46.73
Last Week *5/26/2015*	0.14	99.86	98.71	93.91	66.60	46.73
3 Months Ago *3/3/2015*	0.16	99.84	98.10	93.44	67.46	39.92
Start of Calendar Year *12/30/2014*	0.00	100.00	98.12	94.34	77.94	32.21
Start of Water Year *9/30/2014*	0.00	100.00	100.00	95.04	81.92	58.41
One Year Ago *6/3/2014*	0.00	100.00	100.00	100.00	76.68	24.77

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
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- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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NOAA/NWS/NCEP/CPC

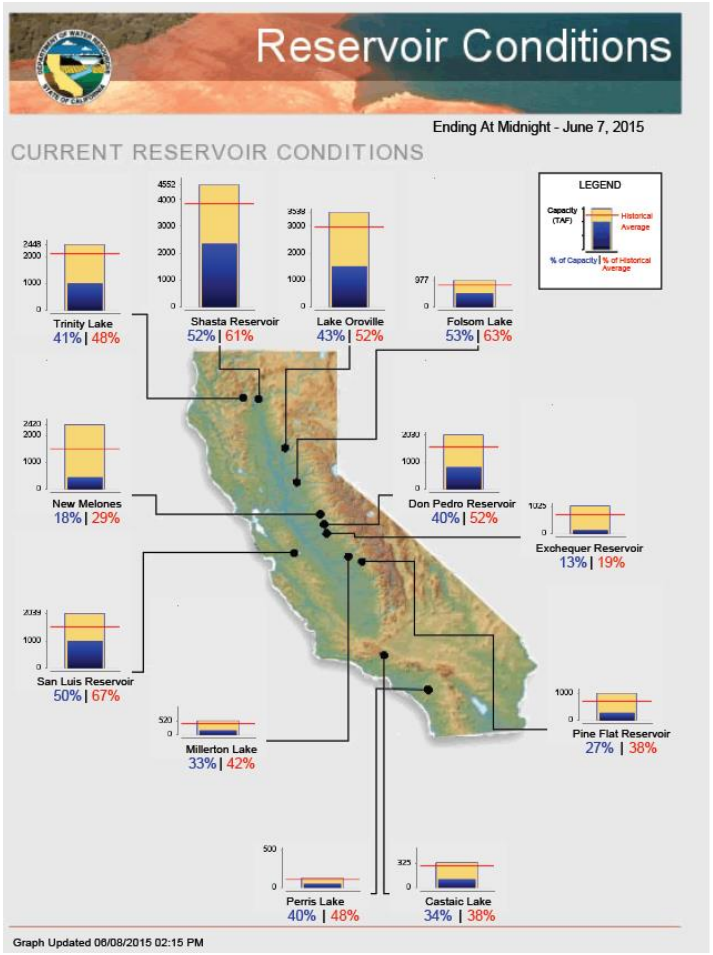
http://droughtmonitor.unl.edu/

Table 4.4: Storage in Selected Reservoirs in Dry Water Years

End-of-water-year storage expressed as percent of capacity and percent of average at end of water year

	1976		1977		1990		1991		1992		2008		2009		2013		2014	
	% of capacity	% of average	% of capacity	% of average	% of capacity	% of average	% of capacity	% of average	% of capacity	% of average	% of capacity	% of average	% of capacity	% of average	% of capacity	% of average	% of capacity	% of average
Lake Shasta	28%	48%	14%	23%	36%	60%	29%	49%	37%	62%	30%	51%	39%	65%	42%	70%	25%	42%
Lake Oroville	52%	67%	26%	42%	33%	53%	40%	64%	37%	60%	31%	50%	38%	61%	46%	75%	30%	49%
Folsom Lake	43%	75%	15%	27%	18%	32%	52%	92%	18%	31%	28%	49%	42%	74%	37%	65%	35%	62%
Camanche Reservoir	43%	70%	13%	22%	41%	68%	27%	45%	27%	45%	35%	58%	77%	128%	61%	102%	32%	53%
Lake Berryessa	64%	84%	47%	63%	39%	52%	36%	47%	27%	36%	72%	95%	63%	83%	71%	94%	57%	75%
Lake Sonoma	–	–	–	–	38%	74%	47%	90%	56%	108%	53%	103%	51%	100%	50%	97%	39%	75%
Hetch Hechy Reservoir	34%	47%	31%	44%	38%	53%	65%	91%	53%	73%	77%	107%	81%	113%	73%	102%	77%	108%
New Melones Reservoir	–	–	–	–	16%	28%	12%	22%	3%	6%	46%	82%	46%	83%	44%	78%	22%	39%
Lake Don Pedro	33%	49%	15%	22%	49%	72%	47%	69%	38%	57%	52%	77%	71%	105%	53%	79%	38%	57%
Lake McClure	23%	52%	9%	19%	10%	23%	19%	42%	13%	29%	27%	60%	42%	93%	29%	65%	12%	26%
Millerton Lake	87%	215%	38%	94%	35%	87%	34%	83%	32%	78%	38%	95%	67%	167%	61%	151%	35%	88%
Pine Flat Lake	23%	68%	8%	24%	3%	9%	4%	13%	3%	9%	12%	36%	20%	59%	15%	46%	11%	34%
Isabella Lake	12%	37%	6%	19%	9%	26%	17%	53%	15%	45%	21%	65%	18%	55%	10%	30%	9%	27%
San Luis Reservoir	40%	84%	13%	29%	24%	51%	32%	68%	23%	50%	12%	25%	21%	44%	25%	53%	23%	49%
Lake Casitas	80%	96%	72%	86%	54%	65%	58%	69%	75%	90%	84%	100%	74%	89%	63%	76%	53%	64%
Lake Cachuma	75%	95%	57%	72%	18%	23%	32%	40%	82%	104%	91%	115%	75%	94%	48%	61%	32%	40%

2015 Water Supply Reservoirs

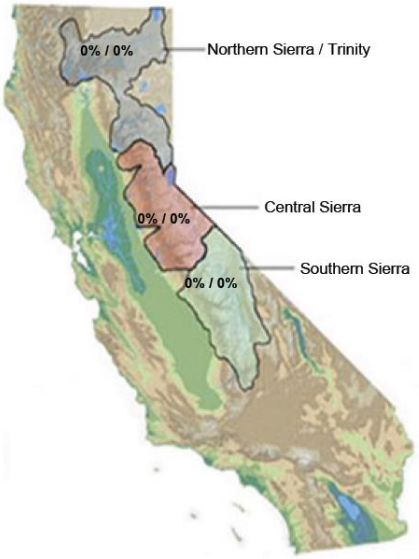


- The major water supply reservoirs are storing more water this year than last but are still far below the historical average.

April 1 Snow Water Content

Current Regional Snowpack from Automated Snow Sensors

% of April 1 Average / % of Normal for This Date



NORTH	
Data as of June 1, 2015	
Number of Stations Reporting	30
Average snow water equivalent (Inches)	0.0
Percent of April 1 Average (%)	0
Percent of normal for this date (%)	0

CENTRAL	
Data as of June 1, 2015	
Number of Stations Reporting	43
Average snow water equivalent (Inches)	0.0
Percent of April 1 Average (%)	0
Percent of normal for this date (%)	0

SOUTH	
Data as of June 1, 2015	
Number of Stations Reporting	25
Average snow water equivalent (Inches)	0.0
Percent of April 1 Average (%)	0
Percent of normal for this date (%)	0

STATE	
Data as of June 1, 2015	
Number of Stations Reporting	98
Average snow water equivalent (Inches)	0.0
Percent of April 1 Average (%)	0
Percent of normal for this date (%)	0

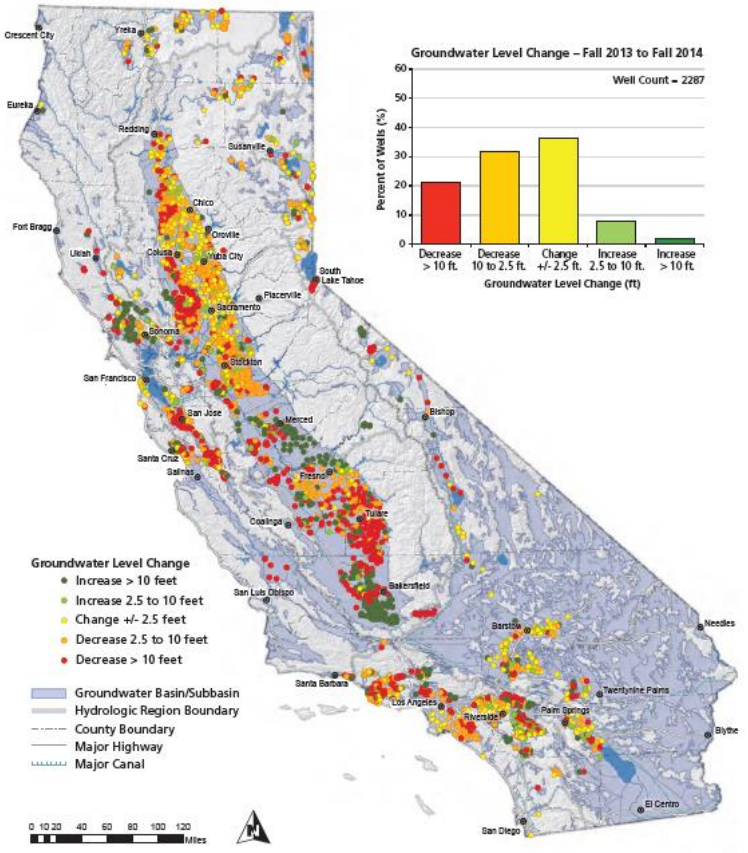
Statewide Average: 0% / 0%

- 2015 – 5 %
- 2014 – 25 %
- 1977 – 25%
- 1988 – 29%
- 1976 – 37%
- 2007 – 39%
- 2013 – 42%
- 1963 – 45%

Groundwater

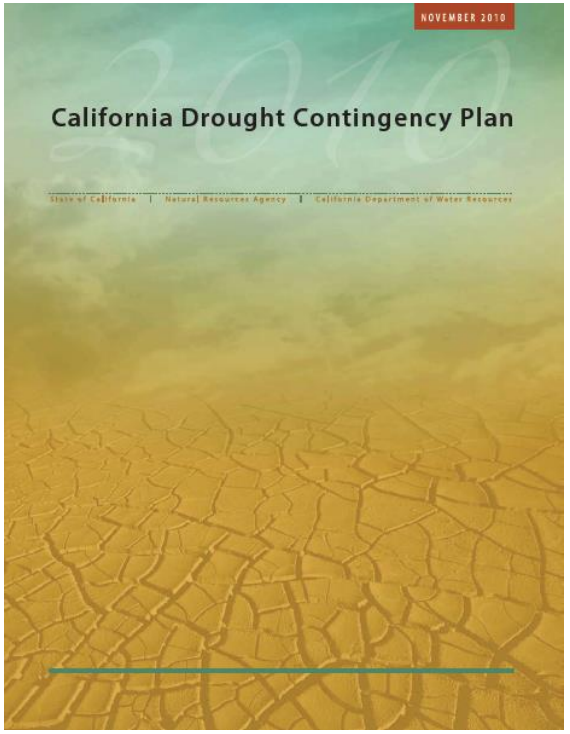
Figure 1.12: California Groundwater Basins

Figure 2.15: Recent Changes in Statewide Groundwater Elevations



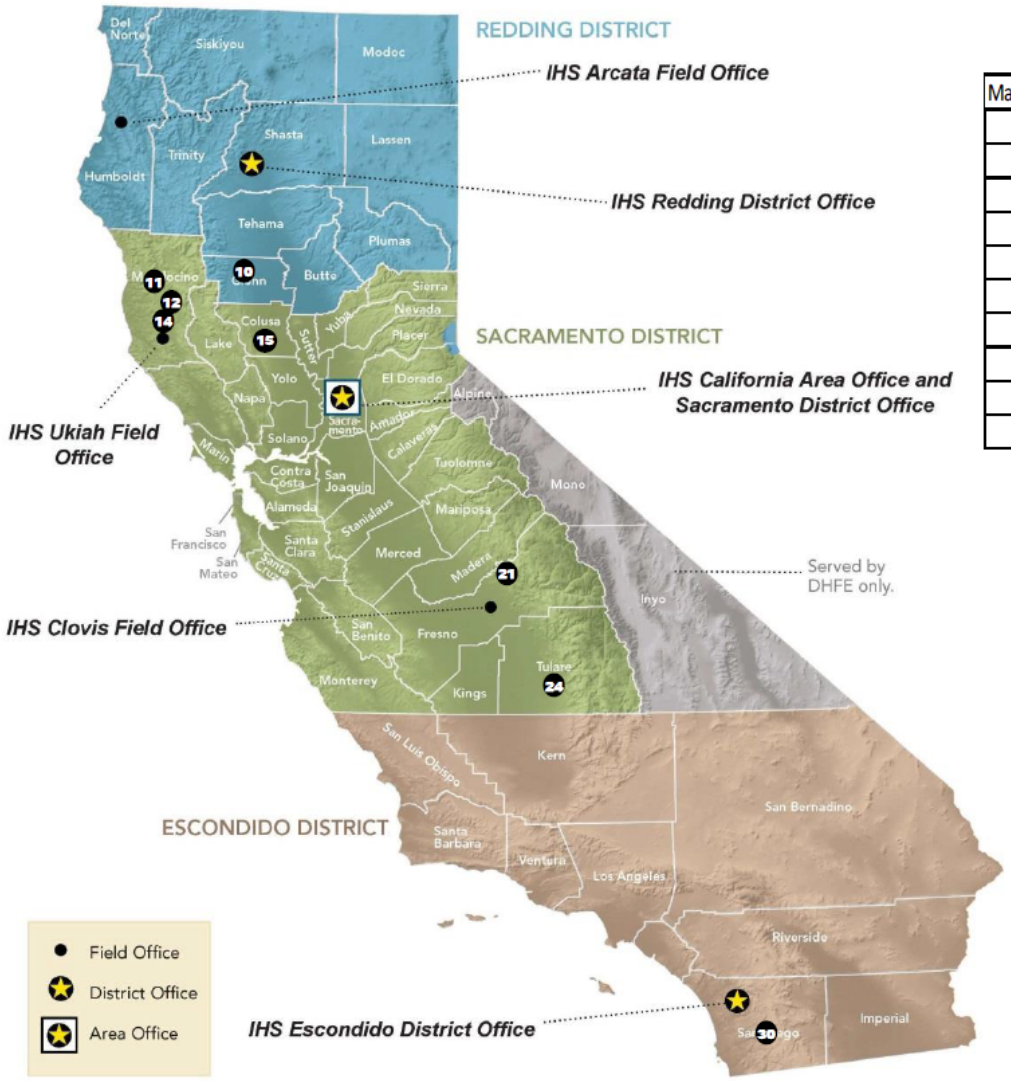
General Updates and Activities

- Ongoing monitoring Tribal water systems for “High Risk and Moderate Risk” determination.
- Indian Health Service (IHS) is available to assist Tribes with developing Drought Contingency Plans. 35% of Tribal water systems do not have Drought Contingency Plans.
- IHS will be hiring six college student to assist with monitoring Tribal water systems identified at the Moderate and High Drought Risk Level.



Tribal water systems at high risk due to drought conditions:

Updated May 07, 2015– *Updates will be made as conditions change and information becomes available.*

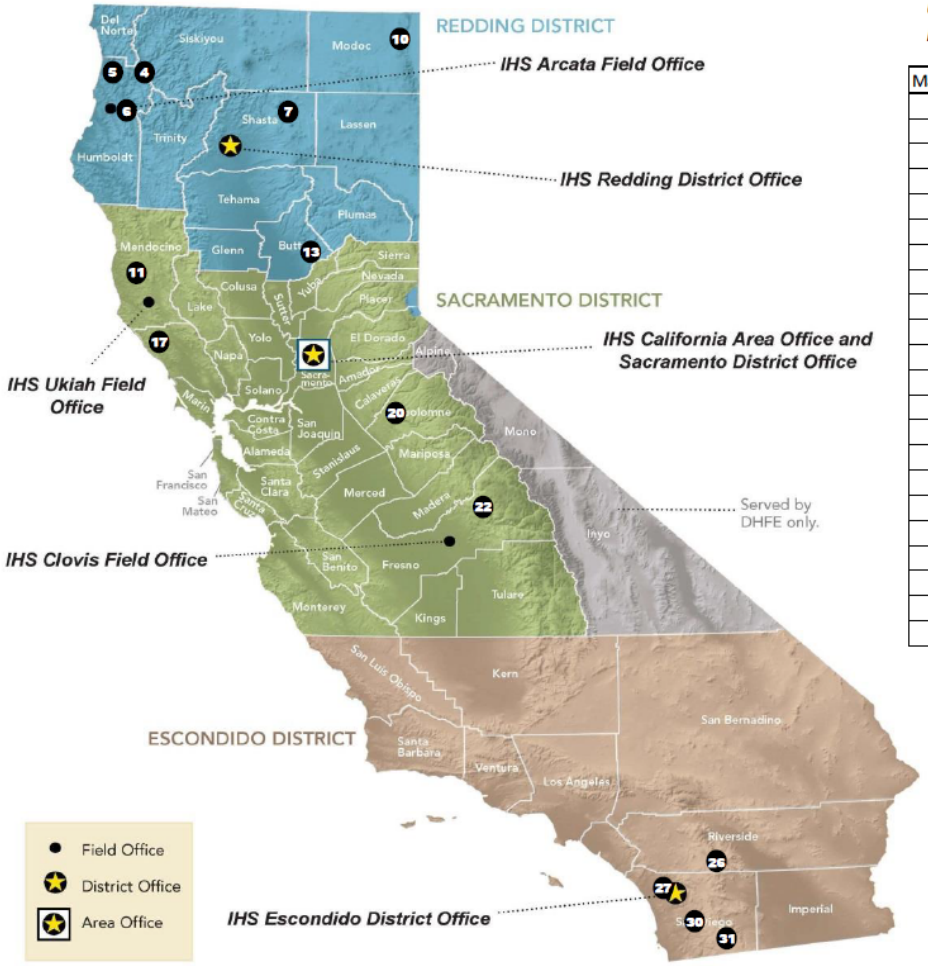


Map #	Tribe	System Name	# of Indian Homes
11	Sherwood Valley	Original Sherwood Valley Rancheria	16
12	Redwood Valley Rancheria	Redwood Valley County Water District	31
14	Coyote Valley	n/a	33
24	Tule River	Main	282
24	Tule River	Cow Mountain	9
10	Grindstone Rancheria	n/a	51
15	Cortina	n/a	6
24	Tule River	Apple Valley	9
21	Big Sandy	n/a	46
30	Santa Ysabel	Main	65

Total Systems to Date = 8

Source: Indian Health Service California Area Office of Environmental Health and Engineering. Based on vulnerability and risk assessment scores.

Tribal water systems at moderate risk due to drought conditions



Updated May 15, 2015– *Updates will be made as conditions change and information becomes available.*

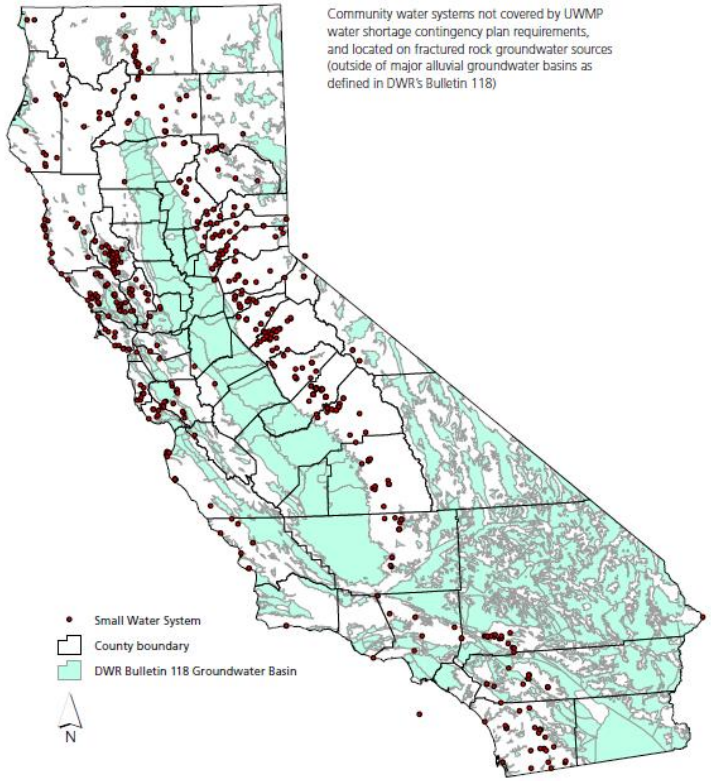
Map #	Tribe	System Name	# of Indian Homes
5	Yurok	Owl Creek/Tulley Creek	8
5	Yurok	Kepel	17
5	Yurok	Wautec (aka Johnson's Village)	14
10	Fort Bidwell	Fort Bidwell community water system	48
6	Hoopa Valley Tribe	Hoopa CWS	746
7	Pit River	Montgomery Creek	10
17	Kashia Band of Pomo Indians	Stewarts Point CWS	15
7	Pit River	XL	18
13	Enterprise Rancheria	Eagle Crest Estates	13
26	Santa Rosa Reservation	Santa Rosa Water System	36
11	Sherwood Valley	City of Willits	35
4	Karuk Tribe	Somes Bar	2
31	La Posta	Upper System	8
27	Pauma	Pauma	60
11	Sherwood Valley	Mitomkai (Eastside Ranch-Lockhart)	15
5	Yurok	Klamath	45
31	La Posta	Lower System	8
30	Santa Ysabel	Ortega System	5
5	Yurok	Weitchpec	27
22	Cold Springs	Coyote Drive System	7
20	Tuolumne	Tuolumne System	76
22	Cold Springs	Main	37

Total Systems to Date = 22

Source: Indian Health Service California Area Office of Environmental Health and Engineering. Based on vulnerability and risk assessment scores.

At-Risk Water Systems

Figure 4.8: Example of Potentially At-Risk Small Water Systems



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21	Big Sandy	n/a	46
30	Santa Ysabel	Main	65

Total Systems to Date = 8

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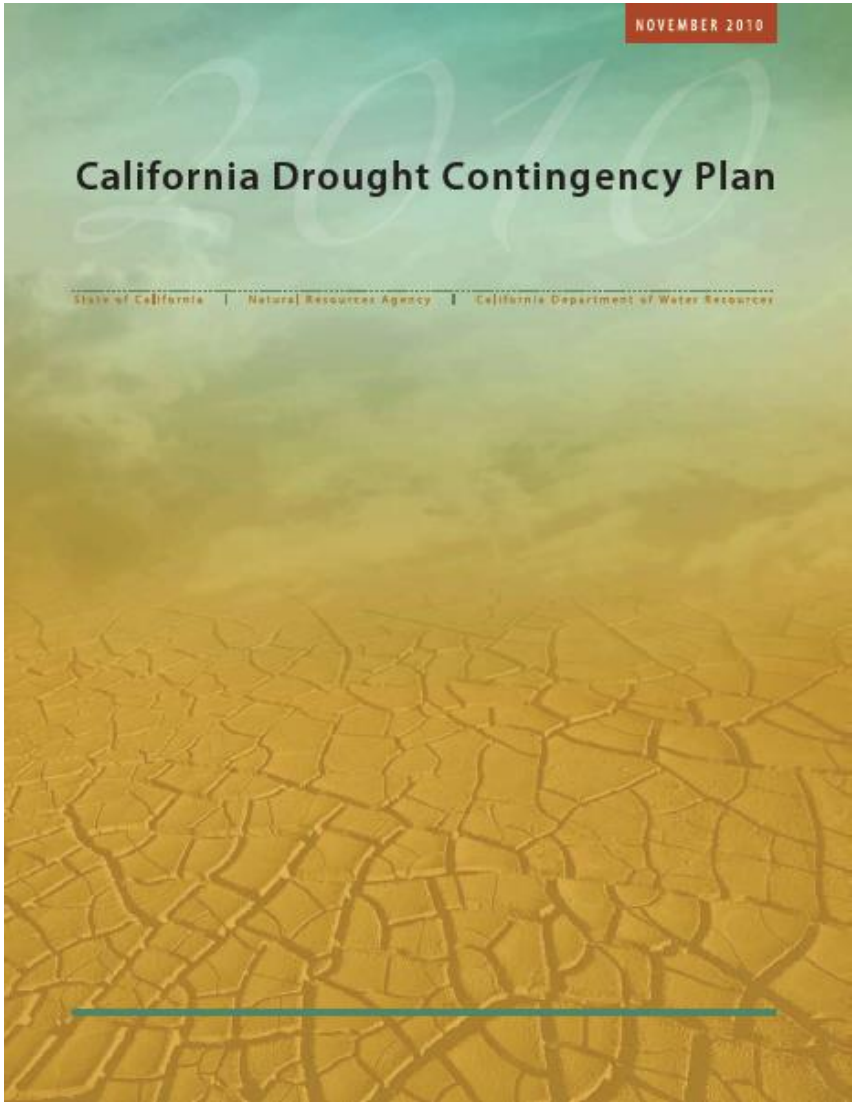
Drought Contingency Plans



Drought Contingency Plans:

A framework of forward-leaning planning for scenarios and objectives, managerial and technical actions, and potential response systems in order to prevent, or better respond to, drought-related critical situations.

Percentage of Tribes with drought contingency plans: 65%

Drought/Water Shortage Planning

- A process of defining possible responses to a variety of “What – If” scenarios
- What are the “Triggers” to activate a particular response?
- Triggers will vary by Tribe
  - Can include – water quality changes, supply interruptions or reductions, environmental changes
  - Need to be defined, declared and easy understand (water contingency plan)
  - Re-assess frequently

Understand Drought Shortage Triggers

- 100% Groundwater
  - Declining groundwater levels due to extended dry conditions, stage triggered by declining water level thresholds
  - Example
    - Stage I: 110 foot static water level
    - Stage 2: 120 foot static water level
    - Stage 3: 130 foot static water level
    - Stage 4: 140 foot static water level
    - Stage 5; No Water

General Updates and Activities

- IHS is required by Congress to identify sanitation facilities deficiencies for existing Indian homes each year for funding.
- IHS uses a priority system called the Sanitation Deficiency System (SDS) to report these deficiencies.
- IHS is currently updating the SDS priority list for FY 2016 funding.
- IHS is anticipating receiving approximately $4 to 5 million to address tribal sanitation deficiencies in California.

General Updates and Activities

- In FY 2015, the IHS funded 10 drought-related projects from SDS for $3,526,000
- SDS Project selection is driven by health impact.
- SDS drought-related projects are rank high on the SDS priority system for funding because of the basic health need of having safe and adequate water supplies.

California Water Plan

- 2013 update – Available online
- Diversified Water Portfolio – Acceptable Reliability
  - How to mange hydrologic conditions variability
  - Evaluates alternative mixes of resources strategies
- Urban Water Use Efficiency Strategies
  - 20% by 2020 (possible 30% by 2030, 40% by 2040)
- Water Recycling
  - 50% by 2030

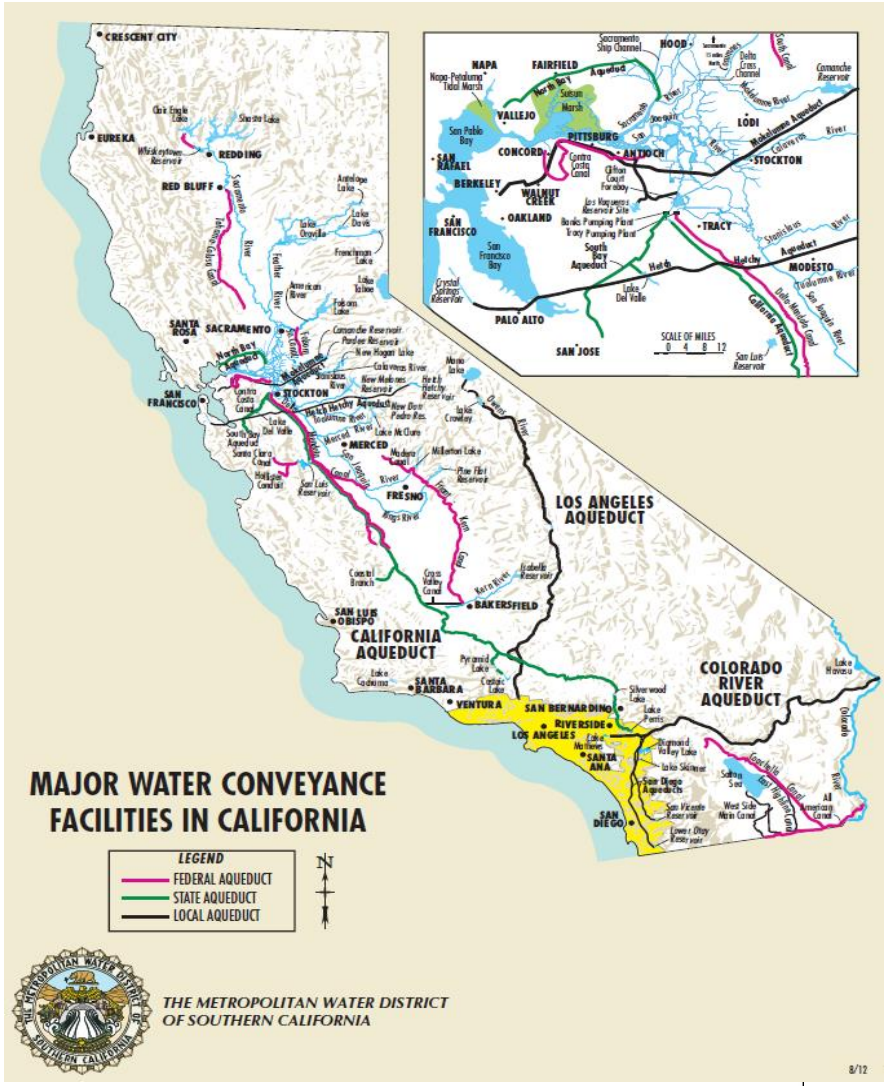
2013 Draft California Water Plan Comparison of Water Management Options

Water Source	Cost Per Acre-Foot
Imported water	$875-$975
Surface water	$400-$800
Groundwater	$375 -$1,100
Desalinated water	$1,800 - $2,800
Recycled water	$1,200 - $2,600
Conservation	$150-$1,000

Facts About Proposition 1 Water Bond

- California Proposition, the Water bond (Assembly Bill 1471 was approved by California's voter on November 4, 2014.
- The measure will enact the Water Quality, Supply and Infrastructure Improvement Act of 2014.
- Prop 1 authorizes $7.545 billion in general obligations bonds.
- Bond funds will be distributed through completive grants.

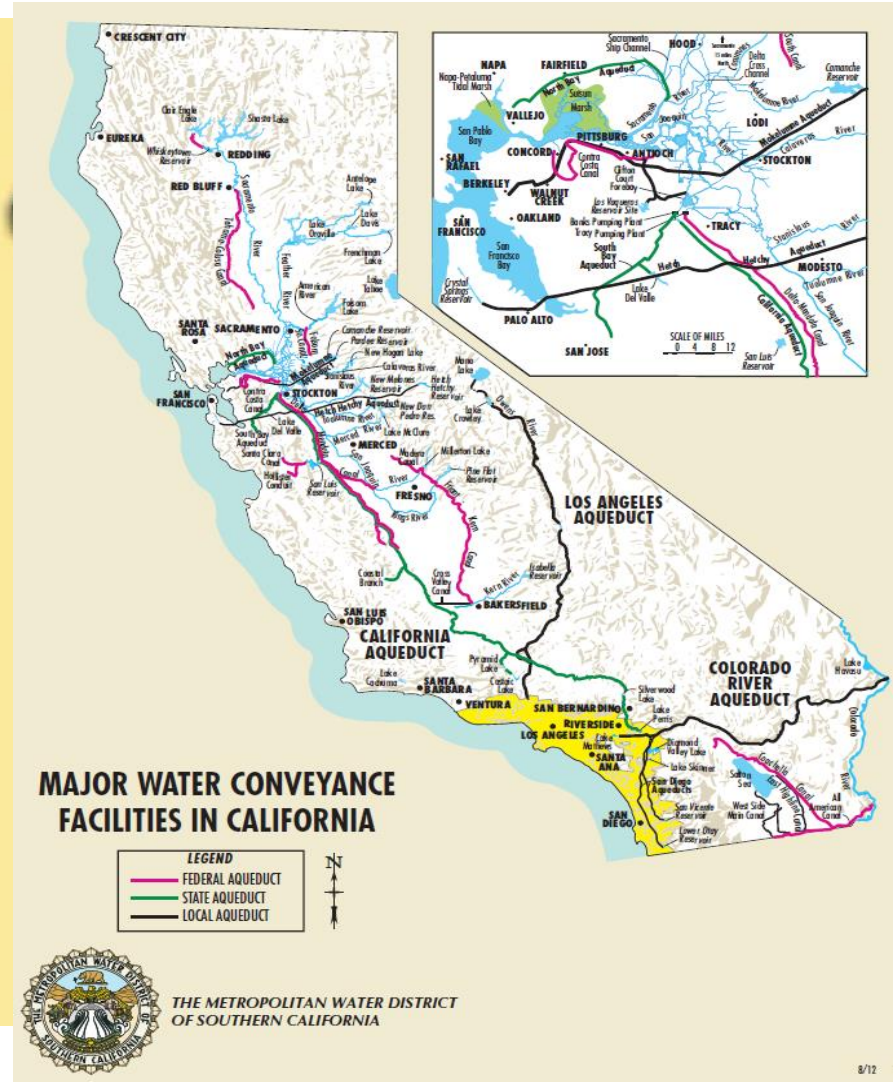
California Water Delivery System



- California's communities, farms and businesses rely on water from a variety of sources. Surface water projects, which capture and deliver rain and snow, provide major portion of the state's total water supply.

- The projects include more than 1,000 federal, state and local reservoirs and hundreds of miles of canals and pipelines.

California Water Delivery System



- Key water projects and the amount of water they deliver:
  - Central Valley Project (federal). Delivers about **7 million acre-feet (MAF)** per year. Constructed in 1930s - 1950s.
  - State Water Project (state). Delivers about **2.5 MAF/year**. Constructed in 1960s – early 1970s.
  - All-American Canal (local). Delivers **3 MAF/year**. Constructed in 1930s.
  - Colorado River Aqueduct (local). Delivers **1.2 MAF / year.** Completed in 1941.
  - Los Angeles Aqueduct (local). Delivers **200,000 AF/year**. Completed in 1913.
  - Mokelumne Aqueduct (local). Delivers **364,000 AF / year**. Completed in 1929. Second aqueduct completed in 1949.
  - San Francisco Hetch Hetchy Project (local). Delivers **330,000 AF/year**. Completed in 1923.

Eight Fire-Resistant, Drought-Tolerant Plants

1. **California Fuchsia** -- This perennial is known for its funnel-shaped flowers ranging in color from fuchsia to pink to red-orange. Once established the California Fuchsia requires minimal watering.
2. **French Lavender** -- This deer-resistant plant requires little maintenance. It's also well suited to drying for rafts and culinary use.
3. **California Lilac** -- When in bloom this California native evergreen shrub has large clusters of small white, blue, purple or pink flowers.
4. **Sage** -- This low maintenance plant is drought tolerant has a long history of medicinal and culinary use.
5. **Society Garlic** -- This flowering plant is popular for landscaping and grows well in drought prone regions.
6. **Red Monkey Flower** -- This native California plant features tubular red flowers and is said to attract hummingbirds.
7. **California Redbud** -- This colorful shrub is covered in small pink and purple flowers when in bloom.
8. **Coreopsis** -- This perennial tolerates a wide variety of soil types making it a popular addition to any landscape.

Questions

- *How can we get more of it?*
  - *Future Surface Water Projects*
  - *Tribal Water Rights*
  - *Interconnections to the California water delivery system*
- *How can we use less of it?*
  - *Don't Waste*